

Architecture Redesign to **Optimise the Performance of an RBI-Registered NBFC from India.**





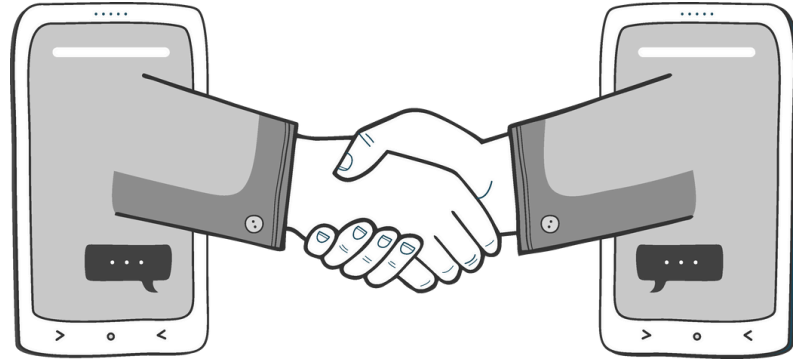
A Performance Optimization Case Study:

The client aimed to address critical performance challenges in their partnership lending/co-lending operations, which included optimizing database management due to a substantial increase in size. Further, the client aimed at improving the transaction processing capabilities of their existing application, ensuring compliance with RBI regulations by securing customer data, and achieving overall performance optimization.

Meet Our Client:

The client, an RBI-registered NBFC, has been a key player in the financial inclusion space for over a decade in India. With a diverse business model, they address credit needs for underserved households and businesses. Their focus on efficient access to debt finance involves a robust risk management framework, blending quantitative analytics and qualitative insights. The client operates at scale through an integrated technology system.





Problem Statement:

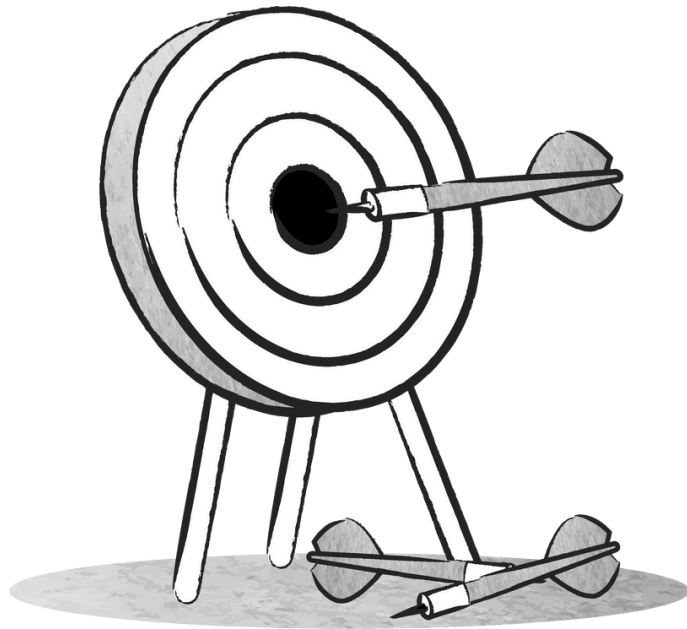
The client sought an advanced application to streamline partnership lending/co-lending processes across banks, financial institutions, and originators, with the primary goal of creating a unified platform for loan origination, underwriting, disbursement, and collection reconciliation.

The prime concerns of the client were:

- A rapid increase in the database size (currently around 26TB) necessitated immediate attention due to elevated infrastructure costs and its direct impact on overall system performance.
- The existing application struggled with large transaction volumes and failed to respond during peak load, impacting business operations and revenue, requiring enhancements in transaction processing capabilities.
- The existing system also lacked security measures such as encryption of customers' personal information.

To cope with this, our client required a highly structured execution plan and configuration for high performance scaling of their application. Thus, they sought collaboration with our enterprise architecture services team.





Business Goals:



Enhance operational integration.



Boost efficiency in diverse retail loan scenarios.



Optimize database management.



Improve transaction processing.



Ensure regulatory compliance.

How Zuci Helped

- 01** Conducted a targeted technical assessment on system architecture, code structure, web, application and database infrastructure and configurations and identified key optimization areas.
- 02** Separated disparate data elements into separate documents.
- 03** Stored data in structured data drive, utilizing reference keys instead of redundant storage.
- 04** Restructured data storage, reducing the overall database size by 70-80%, resulting in significant cost savings.
- 05** Conducted system, kernel, and database-level tuning and optimization, resolving slow queries.



Our Consultation Phases

Explore

Performed health and sustainability check on their system configuration, code structure, database design, infrastructure utilization, logging and audit settings.

Establish

Identified gaps in configurations, query performance, connection parameters, physical storage efficiency and infrastructure utilization and propose architectural blueprint for each area.

Enhance

Roadmap suggestions were made for the optimization of application and system tasks as part of continuous improvement.

Business Outcomes:

Reduced database size from **25-28 TB to 1 TB**

Boosted transaction rate from **5-10 transactions per minute to 50-60 transactions per second**

Enhanced security through column-level encryption in the database

Enabled high-volume loan processing, contributing to substantial revenue growth

Managed to **reduce infrastructure costs by 50% to 60%** through a decrease in database size

Tech Stack





Key Achievements

API performance improved by

76%

Hardware cost saved by


36%.



Our QA experts have your back to elevate your test automation journey.
Let's connect today!

Schedule a call




 USA & Canada

Texas
+1 (469) 320-1156


Toronto
+1 (343) 309-5455


 Europe

Belgium & Geneva
+32 477411912

 India

Chennai
+91 (44) 69178900

 sales@zucisystems.com

 www.zucisystems.com